

ABSTRACT OF THE DISCLOSURE

Data is transferred between a plurality of networks which are not synchronized in clock with each other, without creating either an overflow or an underflow. Data output from a first DVCR is transferred to a second DVCR via a first IEEE-1394 serial bus, a first ATM/IEEE-1394 data transfer apparatus, a first UNI, a first ATM network, an NNI 101, a second ATM network, a second UNI, a second ATM/IEEE-1394 data transfer apparatus, and a second IEEE-1394 serial bus. The second ATM/IEEE-1394 data transfer apparatus stores data in a buffer for each flow and deletes or inserts an empty packet depending upon the amount of data stored in the buffer so as to prevent an overflow and an underflow. A deviation of a time stamp caused by the insertion or the deletion of the empty packet is gradually corrected.